Electric Reliability
Inspection and Maintenance Programs
Illinois District

Distribution Tree Trimming – The Illinois distribution circuits are trimmed on a 3-year cycle.

Total expenditure in 2000: $1,835,000

Transmission Tree Trimming – The Illinois transmission circuits are trimmed on a 3-year cycle. The transmission system is patrolled semi-annually for potentially hazardous situations.

Total expenditure in 2000: $246,000

Distribution Circuit Inspection – Every three years, problems uncovered during scheduled tree trimming on all Illinois District 13.2 kV and 4 kV distribution circuits are noted, reported and followed-up on. In addition, anywhere from monthly to every three years, distribution circuit problems observed during scheduled inspections of distribution capacitors, line reclosers and voltage regulators, are noted, reported and followed-up on. Finally, thorough patrol and inspection of all Illinois distribution circuits is performed on a 10-year cycle. Any problems found are scheduled for maintenance.

Total expenditure in 2000: $122,064

Transmission Circuit Inspection – The Illinois overhead transmission circuit inspection program consists of aerially inspecting each 345 kV and 161 kV circuit twice per year and each 69 kV line every year for general condition, tree clearances, damage, and right-of-way encroachments. In addition, a thorough ground patrol and inspection of each circuit is performed on a 10-year cycle. Any problems found are scheduled for maintenance.

Total expenditure in 2000: $14,178

Transmission Wood Pole Plant Inspection – Illinois transmission wood pole plant is inspected and treated, if needed, on a 10 year cycle.

Total expenditure in 2000: $5,046

Transmission Steel Tower Painting Program – Illinois transmission steel towers are painted on an 18 year cycle.

Total expenditure in 2000: $196,542

Distribution Switch Inspection – Illinois overhead and underground switches are inspected and maintained on a 10-year cycle.

Total expenditure in 2000: $31,196

Capacitor Inspection Program – Illinois capacitor banks are inspected and repaired, if required, on a yearly basis. A detailed aerial inspection is performed on a 10-year cycle.

Total expenditure in 2000: $14,545

Line Recloser Inspection Program – Illinois single-phase and three-phase line reclosers are inspected monthly. These units are maintained on a 10-year cycle.

Total expenditure in 2000: $10,877

Voltage Regulator Inspection Program – Illinois regulators are removed and serviced in-house on a 3-year cycle.

Total expenditure in 2000: $8,256

Animal Guard Program – On an as needed basis, Illinois distribution circuits are identified for animal guard installation based on animal interruption history and operating experience. Eight circuits have been identified for animal guard installation in 2000 and 2001. The eight circuits identified are: 13-S-7, 13-36-1, 13-42-1, 13-38-5, 13-PU-1, 13-46-1, 13-111-3, and 13-40-2. These circuits serve areas in the Milan, Moline, East Moline, Rock Island, and rural areas west of Orion, Illinois. Five additional circuits have been identified for animal guard projects in 2001/2002. The five projects are: 13-36-3, 13-14-1, 13-47-1, 13-101-1, and 13-37-1. These circuits serve areas in the Moline, East Moline, Port Byron/Rapids City, and Orion areas.

Total expenditure in 2000: $79,934

Transmission Line Spacer Replacement – Illinois transmission line spacers that are nearing the end of their useful lives are being replaced. Icing and wind conditions cause transmission line conductors to gallop which may result in an outage due to phase-to-phase contact. Spacers prevent phase-to-phase contact during galloping and the resultant outage. In 2000, spacers were replaced on circuits 161-18-43-1, 161-43-39-1, 66-22-37-1, 66-37-46-1, 66-37-E-1 and a 3 mile section of 66-18-1. The work performed in 2000 completes the transmission line spacer replacement project in Illinois.

Total expenditure in 2000: $482,839

Distribution Capacitor Optimization - Periodic computer analysis of distribution circuits is performed and recommendations made to add, remove, change controls or settings, or relocate distribution capacitors to maintain optimum circuit VAR loadings and voltage profiles throughout the circuits. Four projects were completed in 2000 on nine different circuits, 13-43-1, 13-43-2, 13-E-3, 13-E-4, 13-R-2, 13-R-7, 13-R-8, 13-14-1, and 13-37-5. These circuits serve areas in Coal Valley, Moline, East Moline, and Rock Island. Capacitor projects planned for 2001 include three circuits out of Sub 22, 13-22-2, 13-22-3, and 13-22-5 in Moline, and, three circuits out of Sub 37, 13-37-2, 13-37-3, and 13-37-4 in East Moline.

Total expenditure in 2000: $43,529